

OHIO AGRICULTURAL EXPERIMENT STATION  
Lane Avenue Farm, Columbus, Ohio

Department of Horticulture    Mimeograph Series No. 202  
February 1, 1960

STAKED TOMATO VARIETY TRIALS - 1959  
Columbus, Ohio

Walter N. Brown\*

The 1959 staked-tomato variety trials at Columbus included ten varieties, in six replications, thirty varieties replicated two times, and 29 varieties in single row plots. With but one exception (Cardinal Hybrid) each of the ten varieties in the six replicated trials had been in either the six or two replication trials in 1958. The results are presented in Tables 1, 2, and 3 for the six, two and single replication trials.

CULTURAL INFORMATION

Seed was sown April 18 in flats in the greenhouse and seedlings transplanted to 3" Jiffy peat pots April 27. Plants were set in field May 27. Rye cover crop was plowed down April 20 and 1000 lbs/A of 10-10-10 fertilizer was drilled and disced in May 5. Starter solution, 3 lbs. of 10-52-17 per 50 gal. of water was applied at the rate of  $\frac{1}{2}$  pint per plant. Rows were spaced 48" apart with plants spaced 18" in the row with 20 plants per single row plot of 30' used per replication for yield records. First harvest made on July 27 and last on September 24. Fruits were harvested in the pink stage.

Grades: Established to evaluate the amount and extent of cracking: Grade No. 1 - Crack-free fruits meeting all specifications of U.S. No. 1; Grade No. 2 - Cracks less than  $\frac{1}{2}$ " in length, well healed and otherwise meeting specifications for U.S. No. 1; Grade No. 3 - Cracks longer than  $\frac{1}{2}$ " well healed and otherwise meeting specifications for U. S. No. 2 or better; Culls - All other fruits not meeting specifications of above three grades.

SOURCE OF SEED

<u>Code</u>	<u>Source</u>
A <sub>2</sub>	Asgrow Seed Co., Inc. 272 George St., New Haven 2, Conn.
A <sub>4</sub>	Alpha Seeds, Box 1042, Lompoc, Calif.
B <sub>1</sub>	W. Atlee Burpee & Co., Huntington Park @ 18th St., Phila., 32, Pa.
C <sub>1</sub>	Corneli Seed Co., 101 Chauteau Ave., St. Louis 2, Mo.
C <sub>2</sub>	Campbell Soup Co., G.B. Reynard, Dept. Agr. Res., Riverton, N.J.
F <sub>1</sub>	Ferry-Morse Seed Co., P.O. Box 778, Detroit 31, Mich.
F <sub>2</sub>	Florida Agr. Exp. Sta., J.M. Walters, Gulf Coast Sta., Bradenton, Fla.
G <sub>1</sub>	Gill Bros. Seed Co., Montavilla Sta., Portland 16, Ore.
G <sub>2</sub>	Germain's Seed Co., 6400 E. Washington Blvd., Los Angeles 22, Calif.
H <sub>1</sub>	Joseph Harris Co., Moreton Farms, Rochester 11, N.Y.
H <sub>3</sub>	H. J. Heinz Co., Crop Res. Dept., Bowling Green, Ohio
I <sub>1</sub>	Illinois Agr. Exp. Sta., W. A. Huelsen, Dept. Hort., Urbana, Ill.
K <sub>1</sub>	E. A. Kerr, Exp. Sta. & Products Lab., Vineland, Ontario, Canada
M <sub>3</sub>	Missouri Agr. Exp. Sta., V. N. Lambeth, Dept. Hort., Columbia, Mo.
O <sub>1</sub>	Ohio Agr. Exp. Sta., W.N. Brown, Dept. Hort., Columbus 10, Ohio
O <sub>2</sub>	Ohio Agr. Exp. Sta., L. J. Alexander, Dept. Bot. & Pl. Path., Wooster, Ohio
P <sub>1</sub>	Peto Seed Co., P.O. Box 138, Saticoy, Calif.
P <sub>3</sub>	Purdue Agr. Exp. Sta., E.C. Stevenson, Dept. Hort., West Lafayette, Ind.
P <sub>4</sub>	Penn. Agr. Exp. Sta., Dr. Pollock, Dept. Hort., University Park, Pa.
S <sub>1</sub>	Stokes Seeds, Ltd., St. Catharines, Ontario, Canada
S <sub>2</sub>	Francis C. Stokes Seed Co., Vincentown, N.J.
T <sub>1</sub>	Texas Agr. Exp. Sta., P.A. Young, Tomato Disease Lab., Jacksonville, Tex.
W <sub>1</sub>	F. H. Woodruff & Son (now incorporated with Asgrow Seed Co.)

GENERAL COMMENTS

Growing conditions during June, July, August and Sept. were adverse with averaging from 0.7° F to 4.6° F. above normal and rainfall from 0.43" to 2.70" below normal. Overhead irrigation was used frequently.

Footnotes for Tables 1, 2 and 3:

<sup>a</sup>Varieties are ranked in order of early yield of No. 1 grade fruits; <sup>b</sup>Figures in ( ) columns 3, 4 and 5 are percentages of total early marketable yield harvested in each grade.

<sup>c</sup>Percentages of total season's marketable yield harvested to Aug. 25 (Early yield).

<sup>d</sup>Percentages of total season's marketable yield harvested in each grade; <sup>e</sup>percentages of culls based on gross early yield, <sup>f</sup>percentages of culls based on gross season's yield,

<sup>g</sup>Average fruit size: marketable weight of fruits divided by number of marketable fruits.

\*Dept. of Horticulture, Ohio Agr. Exp. Sta., 1827 Neil Avenue, Columbus 10, Ohio.

TABLE 1  
STAKED TOMATO VARIETY TRIALS - 1959  
OAES, Columbus, Ohio

6 replications

Variety <sup>a</sup> and Lot Number				Early Yield to August 25					Season's Yield to September 24						
				Pounds of Marketable Fruit per A.				Culls (lbs.)	Average Fruit Size <sup>g</sup>	Pounds of Marketable Fruit per A.				Culls (lbs)	Average Fruit <sup>g</sup>
				No. 1	No. 2	No. 3	Total			No. 1	No. 2	No. 3	Total		
9	Cardinal Hybrid	1469	H <sub>1</sub>	20,522 (57.9) <sup>b</sup>	11,664 (32.9) <sup>b</sup>	3,261 (9.2) <sup>b</sup>	35,447 (48.5) <sup>c</sup>	998 (2.7) <sup>d</sup>	.302	42,023 (57.5) <sup>d</sup>	24,696 (33.8) <sup>d</sup>	6,407 (8.7) <sup>d</sup>	73,126	3,273 (4.3) <sup>f</sup>	.315
4	Pritchard	2591	W <sub>1</sub>	10,340 (30.5)	12,366 (36.4)	11,229 (33.1)	33,935 (53.4)	1,289 (3.7)	.257	27,903 (43.9)	21,611 (34.0)	14,012 (22.1)	63,526	3,430 (5.1)	.260
10	Marietta No. 6	Alex .58	O <sub>2</sub>	9,989 (25.0)	23,843 (59.7)	6,111 (15.3)	39,843 (54.3)	599 (1.5)	.346	25,579 (34.8)	39,144 (53.2)	8,803 (12.0)	73,526	2,366 (3.1)	.341
7	OSU 3-1	37-M	O <sub>1</sub>	9,771 (38.2)	11,652 (45.5)	4,187 (16.3)	25,610 (37.2)	672 (2.6)	.288	32,785 (47.6)	27,618 (40.1)	8,464 (12.3)	68,867	2,263 (3.2)	.323
3	Wisconsin 55	44665	W <sub>1</sub>	9,480 (31.2)	13,957 (46.0)	6,933 (22.8)	30,370 (51.7)	666 (2.1)	.330	17,860 (30.4)	27,745 (47.2)	13,183 (22.4)	58,788	2,765 (4.5)	.351
6	OSU 26-5	58-M	O <sub>1</sub>	9,384 (36.2)	11,265 (43.4)	5,282 (20.4)	25,931 (36.2)	617 (2.3)	.335	33,590 (46.9)	25,628 (35.8)	12,409 (17.3)	71,627	3,382 (4.5)	.368
5	Glamour	1364	H <sub>1</sub>	9,281 (38.1)	11,537 (47.3)	3,551 (14.6)	24,369 (43.7)	926 (3.7)	.297	27,304 (48.9)	21,798 (39.1)	6,691 (12.0)	55,793	2,662 (4.6)	.313
2	Queens	1484	H <sub>1</sub>	8,682 (23.0)	15,676 (41.5)	13,419 (35.5)	37,777 (54.0)	799 (2.1)	.298	21,411 (29.1)	31,902 (43.3)	16,698 (27.6)	70,011	2,729 (3.6)	.31 <sup>g</sup>
1	Moreton Hybrid	1417	H <sub>1</sub>	7,012 (16.6)	19,257 (45.5)	16,045 (37.9)	42,314 (61.9)	847 (2.0)	.342	14,835 (21.7)	30,734 (45.0)	22,778 (33.3)	68,347	2,783 (3.9)	.328
8	Big Early Hybrid	6136	B <sub>1</sub>	3,890 (9.8)	15,143 (38.1)	20,685 (52.1)	39,718 (54.9)	2,003 (4.8)	.370	9,843 (13.6)	30,637 (42.4)	31,805 (44.0)	72,285	4,223 (5.5)	.389
*13	Ohio Red	C7-58	O <sub>1</sub>	20,981 (56.2)	13,631 (36.5)	1,325 (7.3)	35,937 (51.5)	817 (2.1)	.320	28,205 (40.5)	27,842 (39.9)	13,649 (19.6)	69,696	3,086 (4.2)	.344
36	Pa. Hybrid 103	T-59	P <sub>4</sub>	20,927 (42.8)	16,281 (33.3)	11,689 (23.9)	48,896 (65.8)	1,761 (3.5)	.295	26,590 (35.8)	24,938 (33.6)	22,760 (30.6)	74,288	3,449 (4.4)	.297
16	Hotset	T-59	T <sub>1</sub>	18,386 (48.4)	10,382 (27.4)	9,184 (24.2)	37,952 (60.3)	5,118 (11.9)	.218	28,931 (45.9)	18,858 (29.9)	15,192 (24.2)	62,981	10,491 (14.3)	.220
28	Cornell 53-548 Sel.	NW - 53	O <sub>1</sub>	15,482 (55.4)	8,694 (31.1)	3,775 (13.5)	27,951 (48.2)	2,287 (7.6)	.286	30,111 (51.9)	20,110 (34.7)	7,768 (13.4)	57,989	4,175 (6.7)	.302
31	Mozark	T-59	M <sub>3</sub>	14,847 (54.3)	7,278 (26.6)	5,209 (19.1)	27,334 (53.2)	1,307 (4.6)	.251	32,470 (63.2)	12,451 (24.2)	6,443 (12.6)	51,365	2,668 (5.2)	.267
15	Indian River	T-59	F <sub>2</sub>	13,758 (42.8)	10,727 (33.4)	4,320 (23.8)	28,805 (44.0)	962 (2.9)	.297	23,904 (36.5)	25,737 (39.3)	15,845 (24.2)	65,486	3,013 (4.4)	.302

LSD @ 5% Level

\*TABLE 2.

TABLE 2 (cont'd)  
STAKED TOMATO VARIETY TRIALS - 1959  
OAES, COLUMBUS, OHIO

(2 replications)

Variety <sup>a</sup> and Lot Number			Source	Early Yield to August 25					Season's Yield to September 24						
				Pounds of Marketable Fruit per A.				Culls (lbs.)	Average Fruit Size <sup>g</sup>	Pounds of Marketable Fruit per A.				Culls (lbs)	Average Fruit Size <sup>g</sup>
				No. 1	No. 2	No. 3	Total			No. 1	No. 2	No. 3	Total		
26	Viceroy	T-59	K <sub>1</sub>	13,032 (42.6)	12,469 (40.7)	5,118 (16.7)	30,619 (65.2)	1,071 (3.4)	.364	20,255 (43.1)	18,549 (39.5)	8,186 (17.4)	46,990 (4.8)	2,378 (4.8)	.354
24	Hybrid R <sub>11</sub>	89241	F <sub>1</sub>	12,560 (45.0)	8,256 (29.6)	7,097 (25.4)	27,933 (58.3)	1,670 (6.0)	.245	24,430 (50.9)	13,739 (28.7)	9,783 (20.4)	47,952 (4.8)	2,414 (4.8)	.255
34	Mo. Cross Supreme	T-59	M <sub>3</sub>	11,816 (34.6)	12,215 (35.8)	10,073 (29.5)	34,104 (44.9)	1,761 (4.9)	.290	28,169 (37.1)	28,241 (37.2)	19,475 (25.7)	75,885 (4.3)	3,412 (4.3)	.310
17	Homestead 24	5606A	A <sub>2</sub>	9,819 (31.4)	12,832 (41.1)	8,585 (27.5)	31,236 (45.8)	998 (3.1)	.309	20,854 (30.6)	34,122 (50.0)	13,213 (19.4)	68,190 (4.0)	757 (4.0)	.307
14	Foremost E21	85209	F <sub>1</sub>	9,710 (27.6)	18,041 (51.3)	7,387 (21.1)	35,138 (52.5)	454 (1.3)	.375	20,038 (29.9)	31,999 (47.8)	14,919 (22.3)	66,956 (3.0)	2,069 (3.0)	.367
22	Early Crop Hybrid	1463	H <sub>1</sub>	9,547 (23.1)	16,226 (39.3)	15,500 (37.6)	41,273 (43.3)	1,220 (6.7)	.200	48,860 (51.3)	23,250 (24.4)	23,214 (24.3)	95,324 (6.7)	6,861 (6.7)	.306
32	Mosage	T-59	M <sub>3</sub>	9,038 (27.0)	10,182 (30.4)	14,248 (42.6)	33,469 (52.0)	2,196 (6.2)	.285	16,117 (25.0)	21,707 (33.7)	26,535 (41.2)	64,360 (4.9)	3,340 (4.9)	.307
37	Oregon Centennial	9028	E <sub>1</sub>	8,022 (30.7)	8,531 (32.7)	9,547 (36.6)	26,100 (62.4)	817 (3.0)	.295	10,944 (26.2)	13,812 (33.0)	17,061 (40.8)	41818 (4.0)	1,760 (4.0)	.289
39	Big Red F <sub>2</sub>	T-59	A <sub>4</sub>	7,314 (38.0)	5,935 (30.8)	6,008 (31.2)	19,257 (56.2)	1,198 (5.9)	.324	13,776 (40.2)	12,269 (35.8)	8,222 (24.0)	34,267 (7.7)	2,868 (7.7)	.321
27	Vinered	T-59	K <sub>1</sub>	7,151 (27.4)	12,995 (49.8)	5,935 (22.8)	26,081 (64.4)	3,212 (11.0)	.215	16,408 (40.5)	16,880 (41.6)	7,242 (17.9)	40,529 (10.0)	4,579 (10.0)	.233
35	Early Hybrid 117	T-59	P <sub>1</sub>	6,788 (12.9)	19,239 (36.4)	26,753 (50.7)	52,780 (66.2)	1,488 (2.7)	.303	11,108 (13.9)	28,659 (35.9)	39,984 (50.1)	79,751 (4.4)	3,648 (4.4)	.292
23	Hybrid R <sub>3</sub>	89239	F <sub>1</sub>	6,244 (27.1)	10,019 (43.5)	6,788 (29.4)	23,051 (63.5)	1,851 (7.4)	.259	13,231 (36.4)	13,522 (37.2)	9,565 (26.3)	36,318 (7.4)	2,922 (7.4)	.258
20	Pink Shipper	1503	H <sub>1</sub>	5,064 (34.6)	6,189 (42.3)	3,376 (23.1)	14,629 (28.1)	762 (4.9)	.291	16,299 (31.3)	23,867 (45.8)	11,925 (22.9)	52,090 (6.1)	3,358 (6.1)	.340
19	Homestead 2	1487	H <sub>1</sub>	6,588 (21.8)	12,306 (40.7)	11,362 (37.5)	30,256 (47.9)	871 (2.8)	.324	13,122 (20.8)	25,918 (41.0)	24,140 (38.2)	63,180 (4.1)	2,722 (4.1)	.335
18	Homestead FM	D-6415	F <sub>1</sub>	6,552 (28.5)	9,874 (43.0)	6,552 (28.5)	22,978 (32.0)	1,724 (7.0)	.294	15,954 (22.2)	35,828 (50.0)	19,929 (27.8)	71,711 (5.5)	4,138 (5.5)	.339

LSD @ 5% Level

TABLE 2 (cont'd)  
STAKED TOMATO VARIETY TRIALS - 1959  
OAES, Columbus, Ohio

Variety <sup>a</sup> and Lot Number		Source	Early Yield to August 25						Season's Yield to September 24					
			Pounds of Marketable Fruit per A.				Culls (lbs)	Average Fruit Size <sup>g</sup>	Pounds of Marketable Fruit per Acre				Culls (lbs.)	Average Fruit Size <sup>g</sup>
			No. 1	No. 2	No. 3	Total			No. 1	No. 2	No. 3	Total		
29 Marietta No. 4	Alex. 57	O <sub>2</sub>	4,901 (21.5)	9,329 (40.9)	8,585 (37.6)	22,815 (36.1)	1,633 (7.2)	.258	13,667 (21.6)	29,258 (46.3)	20,255 (32.1)	63,180	3,830 (5.7)	.310
38 Big Boy Hybrid	6123	B <sub>1</sub>	3,902 (14.7)	12,197 (45.9)	10,473 (39.4)	26,572 (37.9)	780 (2.8)	.367	8,403 (12.0)	36,645 (52.3)	25,011 (35.7)	70,059	2,105 (2.9)	.419
21 Early Hybrid	1469	H <sub>1</sub>	3,721 (8.2)	10,745 (23.6)	31,109 (68.2)	45,575 (73.5)	1,815 (3.8)	.142	9,293 (15.0)	16,916 (27.3)	35,828 (57.7)	62,037	1,561 (8.6)	.228
30 Geneva 11	1468	H <sub>1</sub>	3,575 (14.2)	9,928 (39.6)	11,598 (46.2)	25,101 (45.3)	3,466 (12.1)	.250	10,382 (18.7)	22,869 (41.3)	22,179 (40.0)	55,430	6,407 (10.4)	.265
40 Longred	1222	H <sub>1</sub>	3,358 (8.8)	13,830 (36.4)	10,309 (27.1)	38,006 (59.5)	726 (1.9)	.390	14,701 (23.0)	32,688 (51.2)	16,480 (25.8)	63,870	2,378 (3.6)	.298
11 Early Red Chief	322	S <sub>1</sub>	3,113 (8.7)	15,101 (42.0)	17,696 (49.3)	35,919 (57.6)	1,597 (4.3)	.297	8,077 (13.0)	27,933 (44.8)	26,299 (42.2)	62,309	3,612 (5.5)	.293
12 Fireball	1363	H <sub>1</sub>	2,759 (14.4)	7,895 (41.3)	8,458 (44.3)	19,112 (84.6)	998 (5.0)	.251	4,247 (18.8)	9,148 (40.5)	9,202 (40.7)	22,597	1,797 (7.4)	.249
25. Hybrid R 18	89240	F <sub>1</sub>	1,198 (3.8)	13,213 (41.8)	17,224 (54.4)	31,635 (50.3)	1,270 (3.9)	.373	8,168 (13.0)	25,664 (40.8)	29,022 (46.2)	62,853	2,631 (4.0)	.398
33 Mo. Cross Surprise	T-59	M <sub>3</sub>	10,545 (25.3)	19,656 (47.2)	11,416 (27.4)	41,618 (63.1)	1,434 (3.3)	.291	19,457 (29.5)	30,764 (46.7)	15,700 (23.8)	65,939	3,993 (5.7)	.292